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Swiss Software Industry Survey 2018

Current State, Emerging Trends & Long-term
Developments in the Swiss Software Industry

A Study of the University of Bern on behalf of ICTswitzerland



ICTSWITZERLAND
UMBRELLA ORGANISATION FOR THE DIGITAL ECONOMY

It is a process to allow an organization to focus resources on the greatest opportunities to increase sales and achieve the company's target. Marketing strategy's goal is to increase sales and achieve the advantage over other competitors. It includes short term and long term activities of marketing that has to do with the analysis of a company's situation and contribute to its objectives. The objectives will be based on how you gain sales by acquiring and keeping customers.

A marketing strategy helps convey effective messages with the right twist of marketing approaches that will maximize your sales outcome and marketing activities.

Product Categories	Profit per Year				
	2013	2014	2015	2016	2017
General tools	+920.82	-13.9	+920.82	+7207.75	+80.82
Health & Medical	-13.9	+82.94	+239.74	-229.00	-13.9
Art Supply	+82.94	+920.82	+82.94	+239.74	+82.94
Kids & Baby	+659.02	+7207.75	+659.02	-13.9	+659.02
Kitchen wear	-229.00	-229.00	+7207.75	+82.94	-229.00
Shoes	-229.00	-229.00	-229.00	-229.00	-229.00
Furniture	+239.74	+239.74	+239.74	+239.74	+239.74

Growth Percentage



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The report reflects the view of the authors which does not necessarily correspond with the views of the principal or of the support group.

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Preface

This fourth edition of the Swiss Software Industry Survey (SSIS) provides you with in-depth information about the current state, emerging trends, and long-term developments of the Swiss software industry.

In its fourth year, the SSIS continues to be the largest study of its kind. The SSIS was also able to secure the long-term support of strong partners. Most importantly, ICTswitzerland continues to act as the principal of the SSIS and together with Sieber & Partners they provide invaluable support, without which this study would not be possible. We are also proud that over the past four years we were able to continuously improve our [SSIS benchmarking website](#). This benchmarking website has become central to the value proposition of the SSIS because it delivers actionable information for participating companies.

As in the previous year, our goal was to stay close to the industry and the people who shape it. Therefore, we conducted a workshop with key executives and representatives of the Swiss software industry. The goal was to identify improvement potentials so that the SSIS better meets the needs of software professionals. This has led to a number of improvements such as more granular insights of the internationalization of different software activities.

Moreover, the feedback from this workshop has also served as input for our new questions on this year's special theme "Globalization of the Swiss Software Industry". The SSIS has always had a key interest in the internationalization of Swiss software companies. However, so far we have had a strong focus on the internationalization of markets (i.e., export of software products and services). This year, we have extended our questions related to this important aspect of globalization. However, in addition to that, we have broadened the perspective and took a deeper look at the internationalization of software value chains. In doing so, the SSIS 2018 tackles important questions related to globalization throughout the whole software value chain, i.e., from creation, to operation and selling a product. Specifically, we explore the major export markets in which Swiss software companies sell their products and services, as well as how and why they enter these markets. Moreover, we show from and to which destinations Swiss software companies source software-related activities such as development, testing, and operating a system.

We hope you enjoy reading this report!

Thomas Hurni

Dr. Thomas Huber

Prof. Jens Dibbern



Preface

5 Executive Summary

6 Industry Revenue, Profitability & Future Growth

13 Sources of Revenue

16 Globalization of the Software Value Chain

27 About SSIS

Executive Summary

The SSIS 2018 shows that the Swiss software industry has mixed feelings towards the future: Even though the industry plans to create 20.000 additional jobs in 2018-2019, it expects only a moderate revenue growth of 5%. Swiss software companies have improved their standing on international markets: Compared to last year, the export share has grown by 10 percentage points. This success is mainly attributed to the high reliability, innovativeness, and precision of Swiss software companies.

Decreasing Profitability and Slower Revenue Growth

Profitability of Swiss software companies has further plummeted from an already low EBIT margin of 9.1% in 2016 to 6.7% in 2017. Growth expectations have also become cloudier: Swiss software companies expect revenue in 2019 to grow at a rate of 5%, which is 9 percentage points lower compared to last year's SSIS.

5.0% Revenue Growth
6.7% EBIT Margin

Faster Employee Growth

Despite the cloudy revenue growth expectations, Swiss software companies plan to massively increase their workforce and with increasing pace: In 2018, Swiss software companies expect the number of employees to grow by 8.2% and in 2019 at an even higher rate of 13.6%. This translates into 20.000 additional FTEs in 2018-2019.

13.6% Employee Growth
+20.000 Employees

Globalization: Stronger Export Orientation

In 2017, 25.0% of the industry revenue was created outside of Switzerland. This corresponds to an increase of the export share by almost 10 percentage points. Approximately 70.0% of Swiss software exports are generated by the four big neighboring countries. Germany with an export share of 35% is the most important export market. Swiss Software companies outcompete their international competitors with regard to reliability, innovativeness, and precision but fall behind their competitors with regard to price as well as marketing and sales skills.

25% Export Share
Swissness Value Proposition

Globalization: Internationalization of Value Creation

Swiss software products and services are not only increasingly marketed and sold in foreign countries but also created abroad. Swiss software companies plan to increase their foreign workforce by 19.3% and increasingly rely on external service providers in near- and offshore destinations—especially to source implementation and testing activities.

31.5% Outsourcing share
19.3% Foreign employee growth

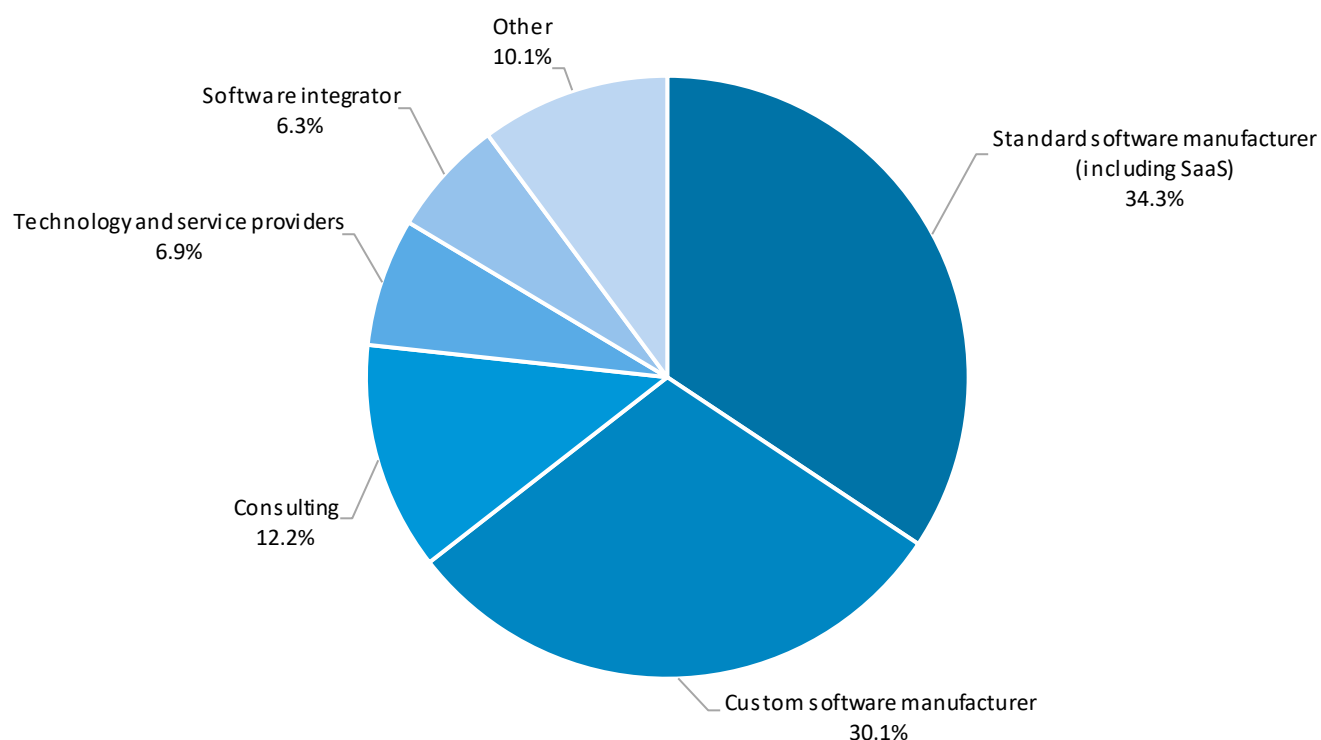
Spotlight on

Revenue, Profitability & Future Growth



Distribution of Participating Companies

Figure 1: Number of companies per subindustry as percentage of total responses



Source: SSIS 2018

N = 335

Projection Method and Distribution of Industry Revenue

Like in recent years, custom software and standard software manufacturers dominate our sample—each accounting for about one third of responses. Also, as in recent years consulting companies (12.2%), technology and service providers (6.9%), and software integrators (6.3%) follow at some distance (see Figure 1).

We used a statistical procedure called post-stratification to make valid statements pertaining to the Swiss software industry as a whole—even in cases when the sample is not representative for the industry. This procedure compares our sample with the software industry as a whole in regards to region, subindustry, company size, and revenue. If the procedure finds that in our sample some companies are under-represented (e.g., very small companies), then, it will assign a higher weight to these under-represented subgroups to adjust for biases resulting from under-representation.

The advantage of this procedure is that statements about the industry as a whole become more reliable.

Since we have used the same procedure for the SSIS 2017, our report is “backward-compatible” and thus all figures in this report can be compared with last year.

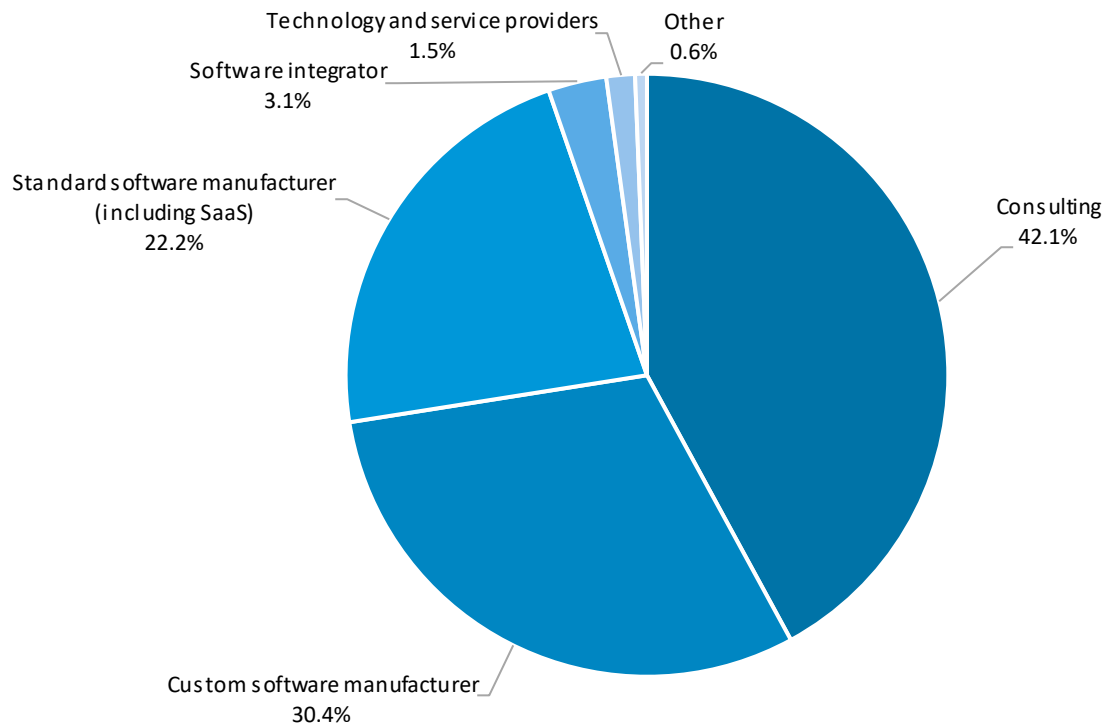
Figure 2 shows that consulting companies are the main contributors to industry revenue (42.1%), followed by manufacturers of custom software (30.4%), and manufacturers of standard software (22.2%).

Software companies are usually diversified, i.e., a consulting company does not only “consult” but also create revenue through other activities such as software integration. Therefore, Figure 3 shows revenue by activities. Consulting and custom software manufacturing remain the most important sources of revenue but they lose in importance compared to software integration and software maintenance.

Interestingly, this figure shows that across all company types almost 50.0% of industry revenue is created through the development of software (standard and custom).

Distribution of Revenue per Subindustry

Figure 2: Revenue per subindustry as percentage of industry revenue

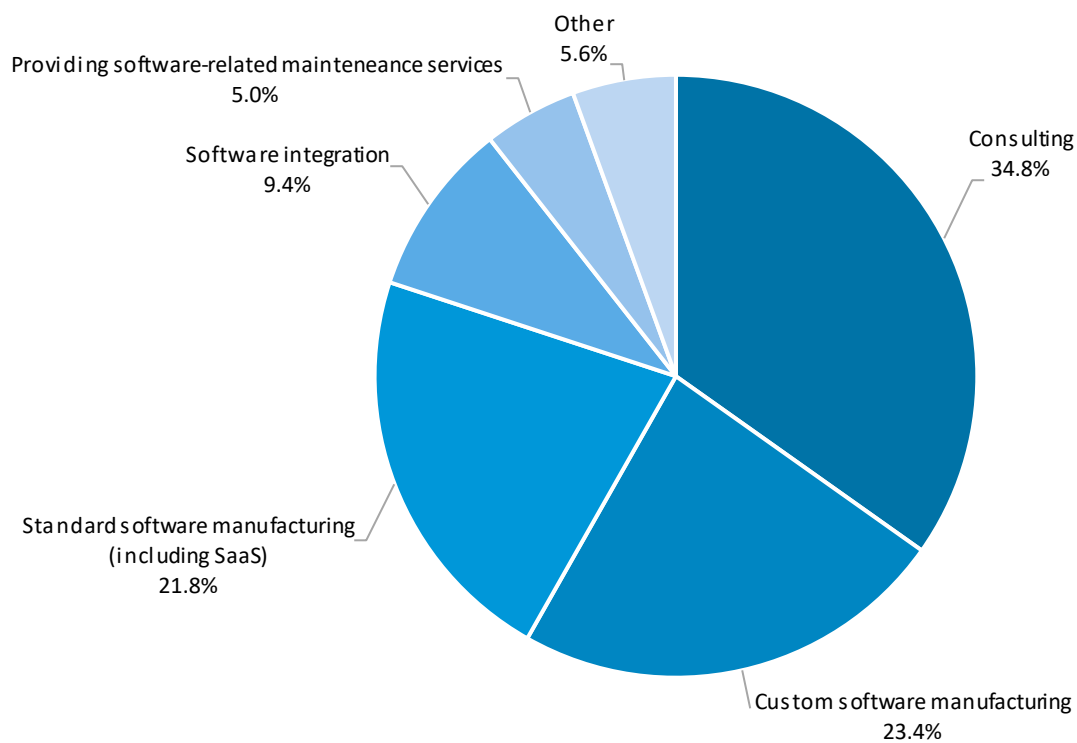


Source: SSIS 2018

N = 187

Distribution of Revenue per Activity

Figure 3: Revenue per field of activity as percentage of industry revenue

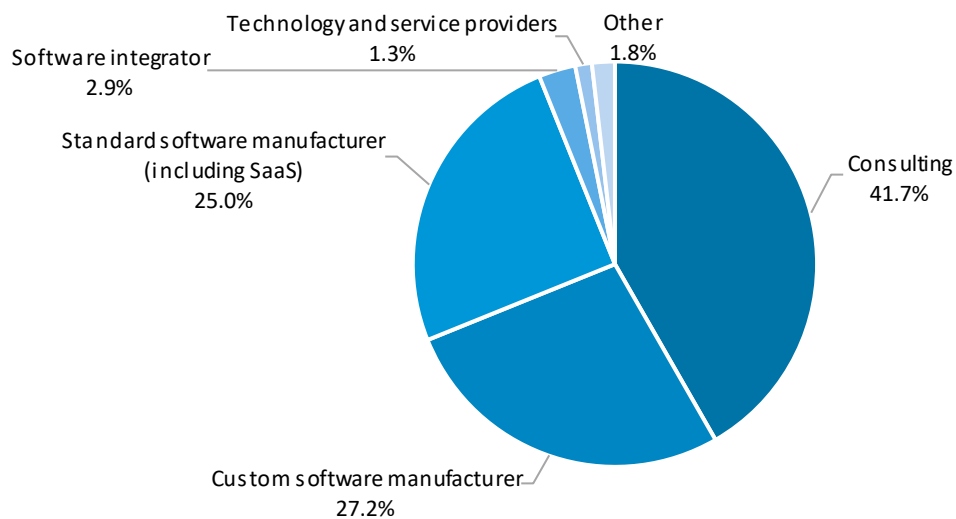


Source: SSIS 2018

N = 187

Distribution of Employees

Figure 4: Number of employees per subindustry as percentage of total employees



Source: SSIS 2018

N = 187

Employee Distribution Mirrors Revenue Distribution

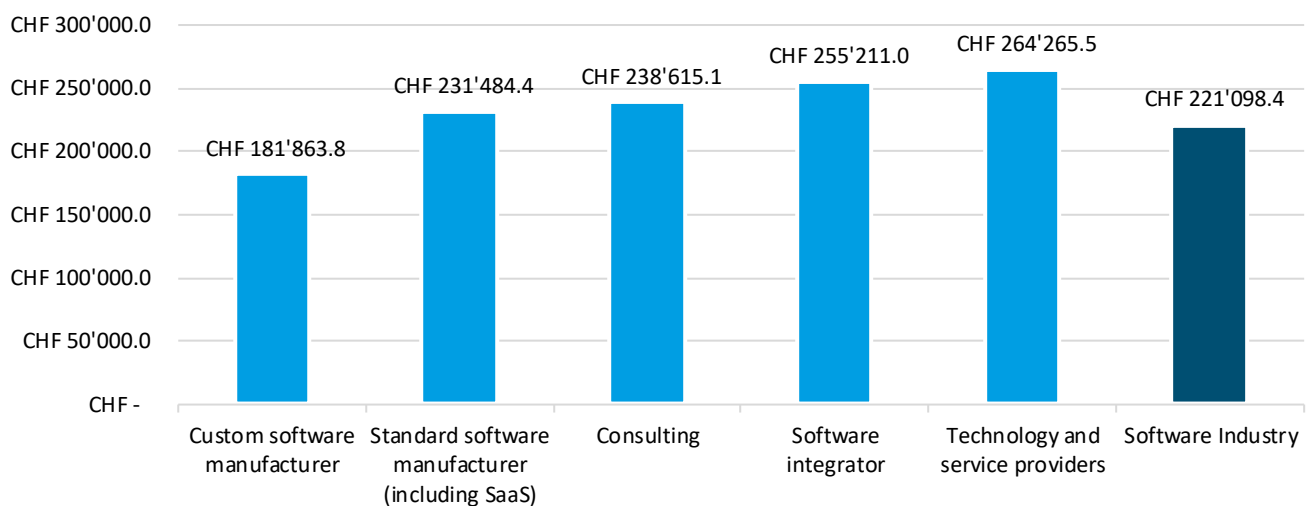
The distribution of employees mirrors the distribution of revenue, i.e., consulting companies employ 41.7% of the employees in the industry, custom software manufacturers 27.2%, and standard software manufacturers 25.0%. Thus, more than 90.0% of the industry's employees either work in consulting or development companies (see Figure 4).

Industry-wide, revenue per employee has remained

roughly stable (2017: CHF 221k, 2016: 225k). As in previous years, the average revenue per employee (see Figure 5), is lowest for manufacturers of custom software (CHF 181k) and highest for technology and service providers (CHF 264k) and software integrators (CHF 255k). Consulting companies (CHF 231k) and manufacturers of standard software (CHF 238k) are in the midfield.

Revenue per Employee

Figure 5: Average revenue per employee

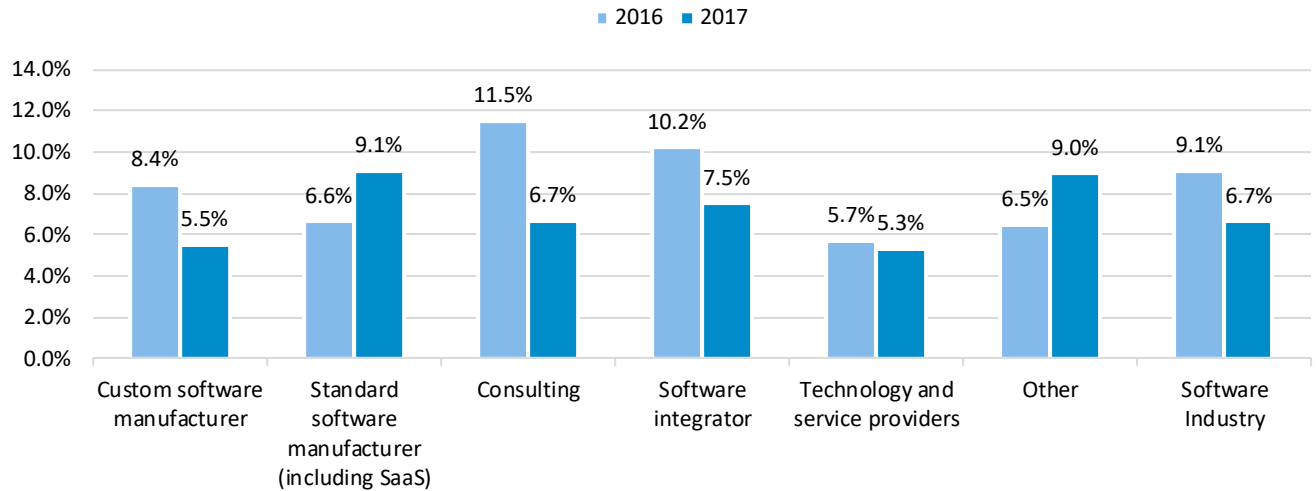


Source: SSIS 2018

N = 187

EBIT Margins in the Swiss Software Industry

Figure 6: EBIT margins by subindustries



Source: SSIS 2018

N = 149

Further Decreasing Profitability

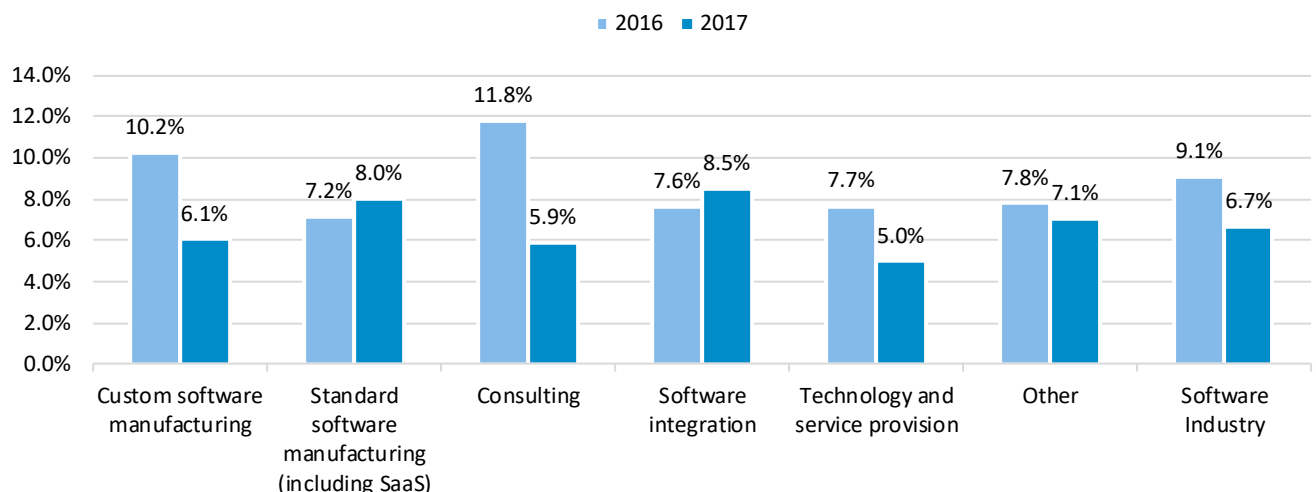
With an EBIT margin of 6.7% profitability of the software industry has further dropped—from an already low level of 9.1% the year before. This is true for all subindustries—with the exception of standard software manufacturers which have improved in profitability (see Figure 6).

Figure 7 shows profitability by activities. This figure reflects broadly the same pattern as Figure 6: com-

pared to the previous year profitability has decreased overall. Again, this decrease shows in almost all sub-categories—with the exception of standard software manufacturing and software integration, which have both increased in profitability.

EBIT Margins per Activity

Figure 7: EBIT margins per activity

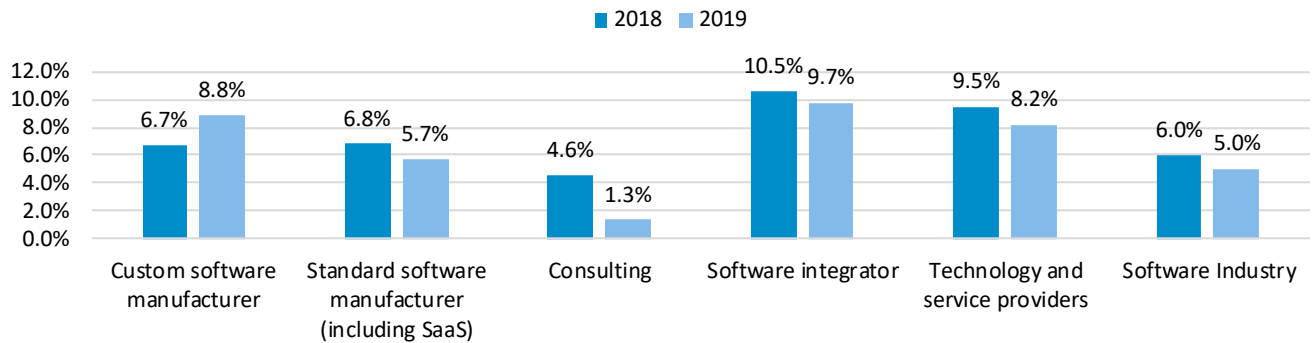


Source: SSIS 2018

N = 149

Expected Growth in Revenue

Figure 8: Expected year over year revenue growth for 2018 and 2019



Source: SSIS 2018

N = 181

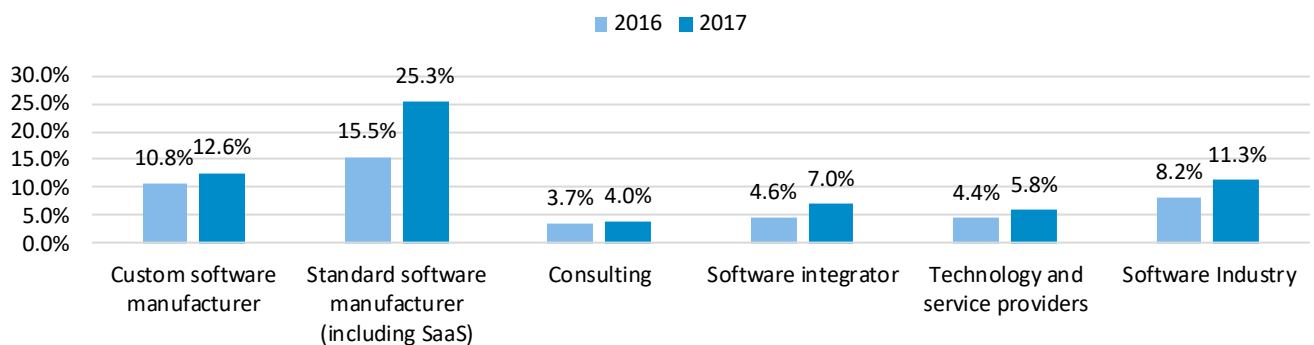
Modest Revenue Growth Expectations

Revenue expectations of the Swiss software industry are modest. In 2018, revenue is expected to grow by 6.0%, in 2019 growth is expected to drop to 5.0%. In both years, software integrators expect to grow the fastest (2018: 10.5%, 2019: 9.7%) and consulting companies to grow the slowest (2018: 4.6%, 2019: 1.3%).

All subindustries expect lower growth in 2019 than in 2018—with one notable exception: Custom software manufacturers expect to grow considerably faster next year (8.8%) than this year (6.7%).

R&D Investments

Figure 9: R&D investments in 2016 and 2017 as percentage of revenue



Source: SSIS 2018

N = 180

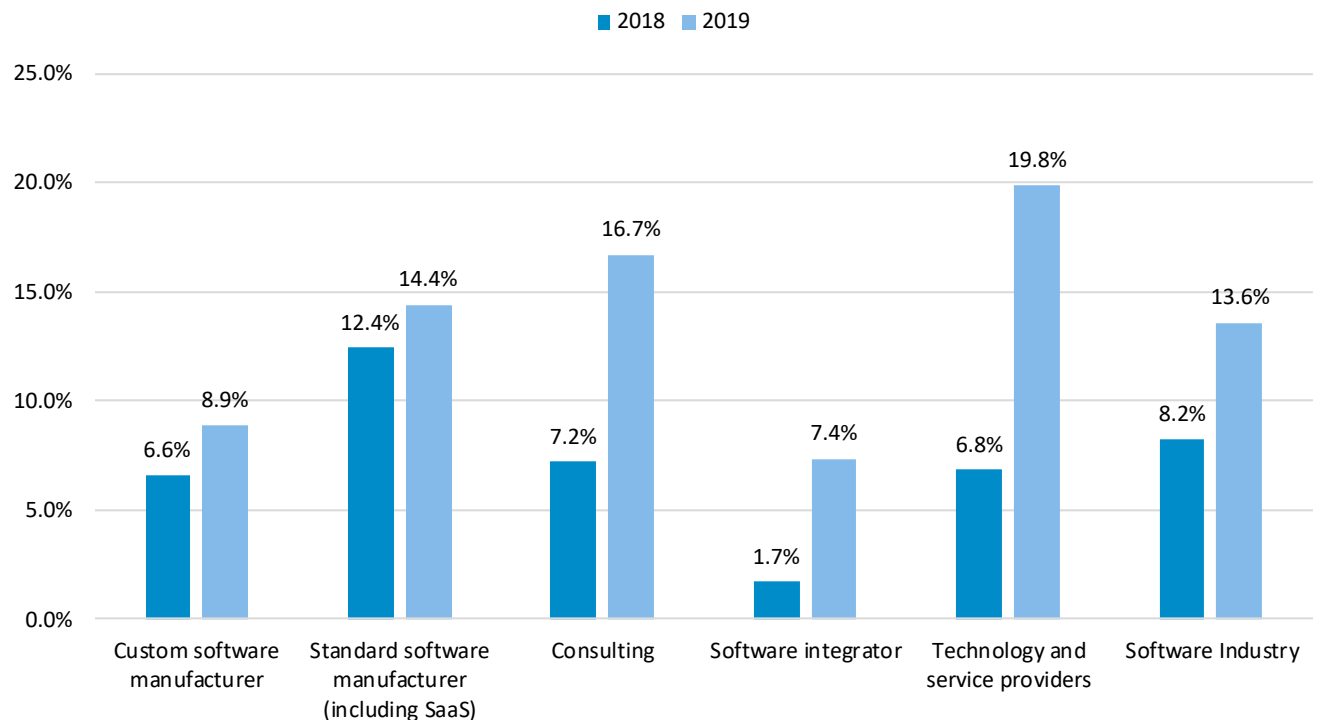
Stronger R&D Investments

Across all subindustries, the Swiss software industry has invested more of its revenue in R&D (see Figure 9) compared to the previous year. Like in previous years, manufacturers of standard software have the highest expenses for R&D by a wide margin (25.3%). With the exception of custom software manufacturers (12.6%),

all other subindustries invest less than 10.0%. Manufacturers of standard software also have increased their R&D expenses by far the most (+10 percentage points). They are followed by software integrators, custom software manufacturers, technology and service providers, and consulting.

Employee Growth Prospects

Figure 10: Expected year over year growth of workforce for 2018 and 2019



Source: SSIS 2018

N = 179

Expected employee growth of

13.6%

In 2019

Employee Growth Outperforms Revenue Growth

In previous years, expectations for revenue and workforce growth were in lockstep, i.e., high increases in expected revenue were mirrored by similarly high increases in workforce.

This time, however, revenue and workforce growth are not in lockstep. In fact, the surveyed companies expect a considerably higher growth in workforce than in revenue. This suggests that the revenue growth might be thwarted by a workforce that is too small or ill-equipped (e.g., in terms of competences) and the software industry tries to overcome these shortages by extensively hiring new personnel. Another explanation might be that the provision of software services becomes increasingly labor-intensive.

In 2018, the Swiss software industry expects to hire 8.2% additional employees. In 2019, this growth is expected to rise to 13.6%. These growth expectations are considerably brighter than in last year's SSIS.

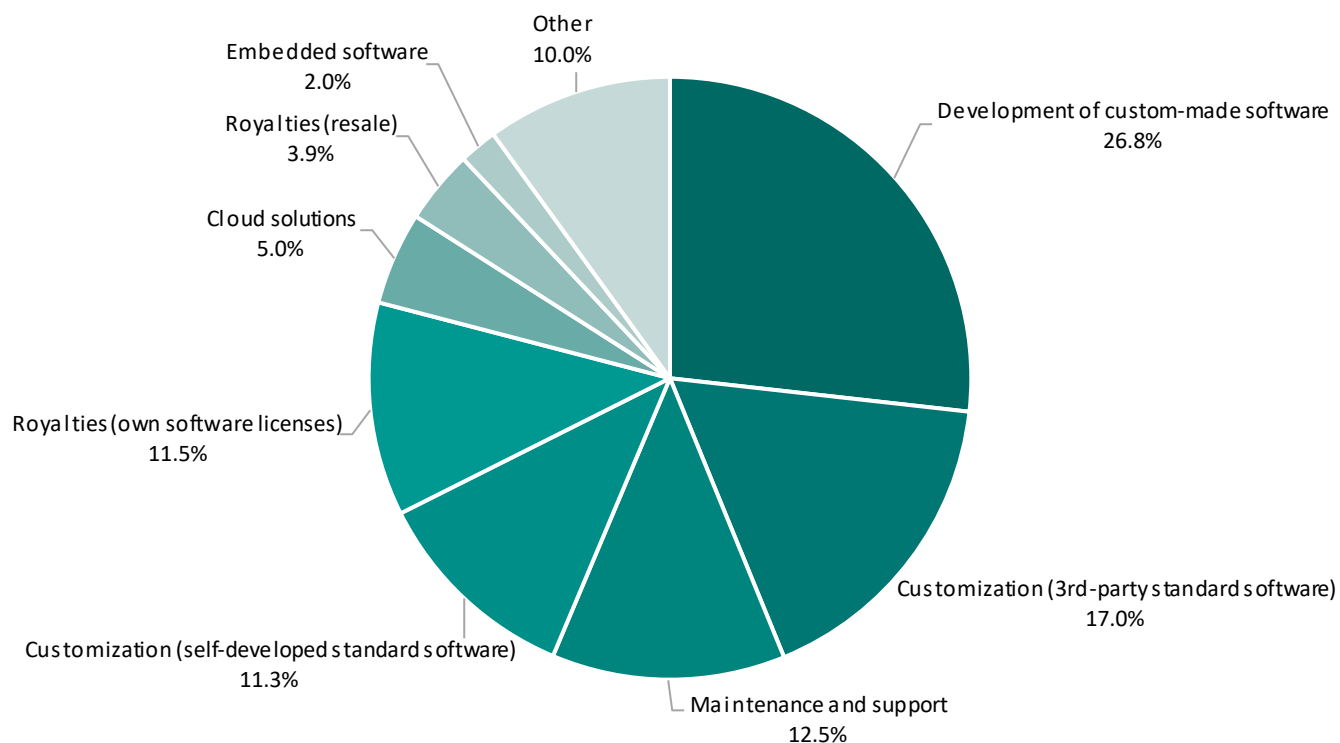
None of the subindustries plan to reduce their workforce. In 2018, manufacturers of standard software plan the steepest increases in their workforce (12.4%), expected employee growth of all other subindustries is well under 8.0%. In 2019, technology and service providers (19.8%), consulting companies (16.7%), and standard software manufacturers (14.4%) expect to increase their workforce by more than 10.0%; only custom software manufacturers and consulting companies expect to grow less than 10.0%.

Spotlight on Sources of Revenue



Sources of Revenue

Figure 11: Revenue from different revenue sources as percentage of industry revenue



Source: SSIS 2018

N = 187

From the industry revenue

26.8%

are generated through custom software development

Sources of Revenue

The development of custom-made software remains the largest source of revenue with a share of 26.8%. However, if the two customization categories are combined—i.e., customization of self-developed and of 3rd-party software—they are responsible for an even larger share of 28.3%. Maintenance and support follows with 12.5%. Thus, the development, customization and maintenance of software are responsible for approximately two thirds of the industry revenue (see Figure 11). Traditional software royalties follow at some distance with 11.5%. Revenue from cloud-based software services is still only responsible for 5.0% of industry revenue.

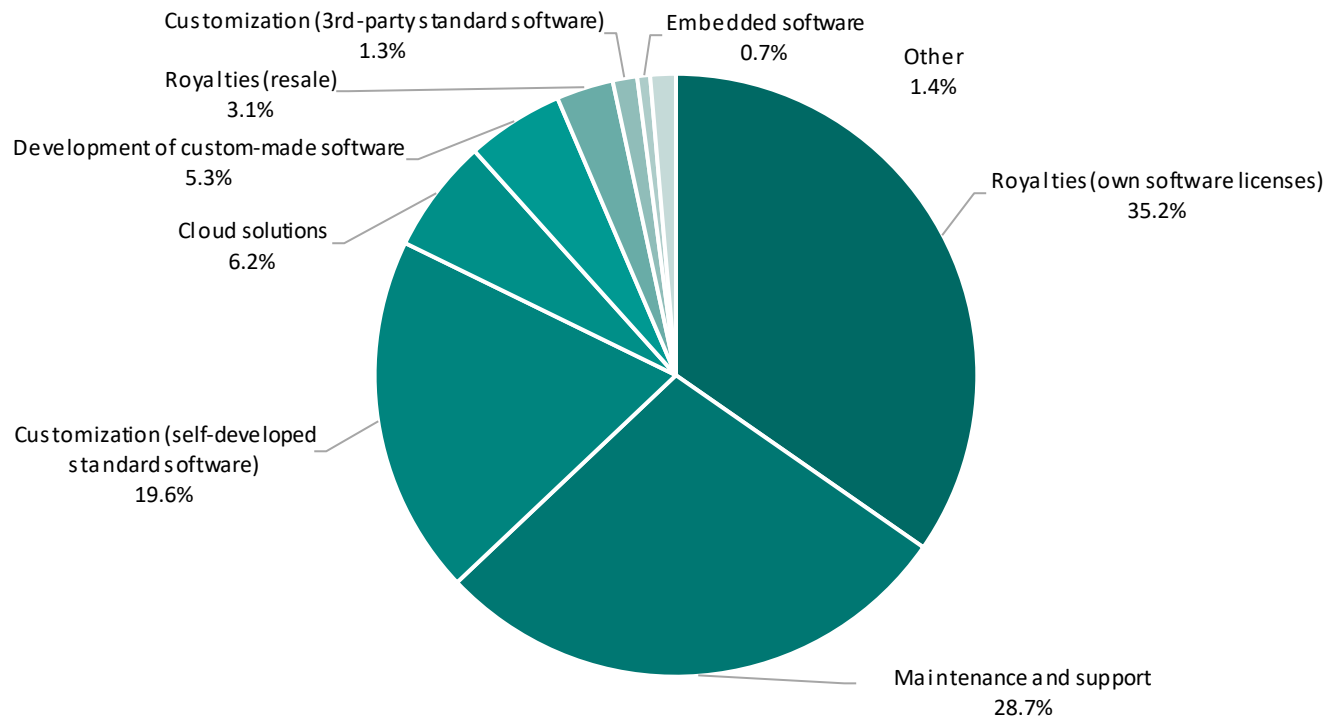
If the sample is split by manufacturers of standard vs.

custom software, the sources of revenue change dramatically. For manufacturers of standard software, royalties are the most important source of revenue (+13 percentage points) for the first time, now followed by maintenance and support (+5 percentage points), and customization (-10 percentage points).

For custom software manufacturers, the development of custom software is by far the largest source of revenue (2017: 45.5%, 2016: 52.9%)—though it has decreased in importance. Compared to last year, customization has considerably gained in importance (+5 percentage points); the other sources of revenue remained largely stable.

Sources of Revenue for Manufacturers of Standard Software

Figure 12: Revenue from different revenue sources as percentage of standard software manufacturer revenue

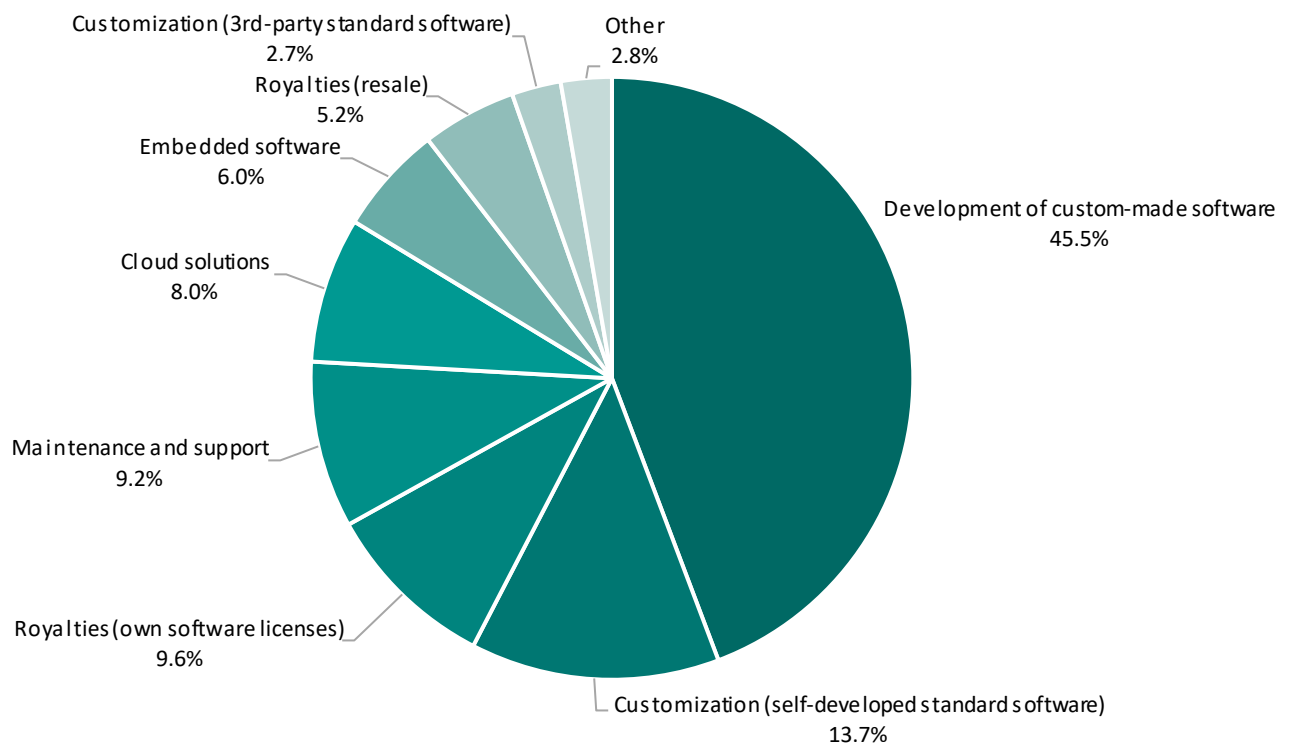


Source: SSIS 2018

N = 63

Sources of Revenue for Manufacturers of Custom Software

Figure 13: Revenue from different revenue sources as percentage of custom software manufacturer revenue



Source: SSIS 2018

N = 61

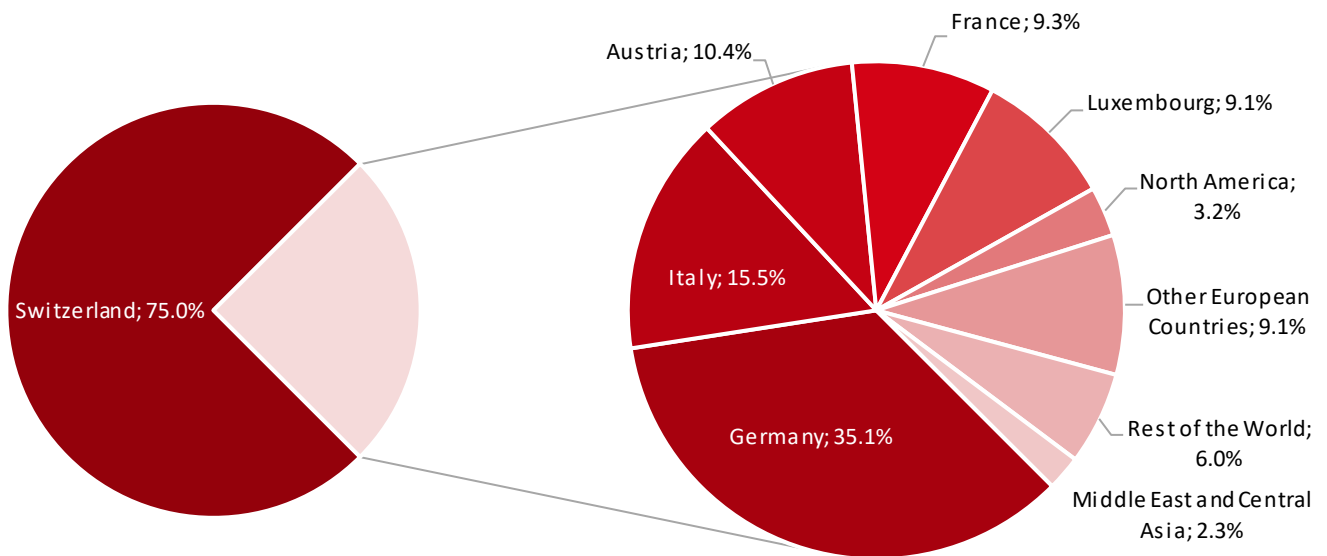
Special Theme

Globalization of the Software Value Chain



Degree of Internationalization and Target Markets

Figure 14: Distribution of international revenue



Source: SSIS 2018

N = 168

Increasing Internationalization of Swiss Software Companies

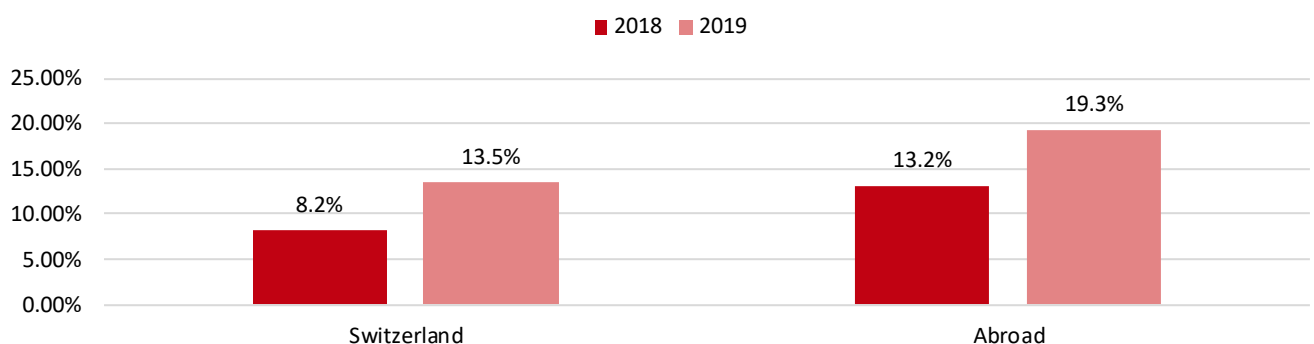
25.0% of the revenue of the Swiss software industry comes from countries other than Switzerland. This is a sharp increase of 10.5 percentage points compared to the year before.

Germany remains the most important export market by a wide margin (35.1%) but compared to the previous year, its share has decreased by 10 percentage points. The neighbouring countries Italy (15.5%), Austria (10.4%), and France (9.3%) follow. Luxembourg with a share of 9.1% is also a notable export market. All non-European regions combined account for only 11.5% of the Swiss software exports.

Software products and services are not only increasingly exported, the value chain is also internationalizing. Accordingly, Swiss software companies increasingly employ employees abroad (see Figure 15). As in the previous year, the foreign workforce is growing at a faster pace than the local workforce. However, our findings strongly indicate that this foreign growth is not at the expense of the domestic growth. In fact, companies with employees abroad also grow their domestic workforce at a faster pace than companies that do not have employees abroad.

Growth of Headcounts

Figure 15: Percentage of growth in headcounts of employees in Switzerland and abroad

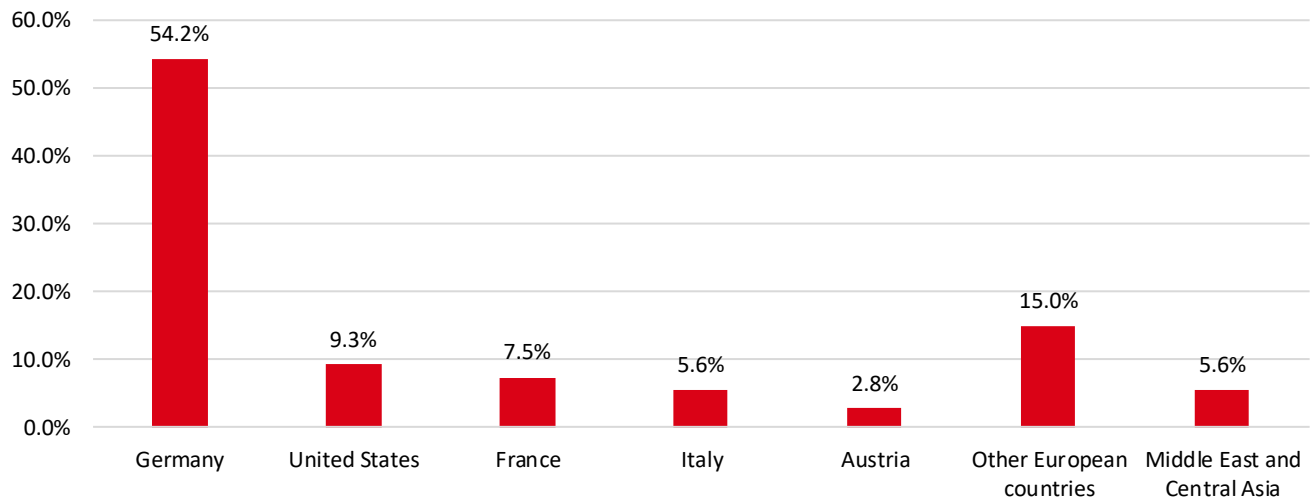


Source: SSIS 2018

N = 180

First International Market

Figure 16: First international market



Source: SSIS 2018

N = 107

Germany as First Export Market

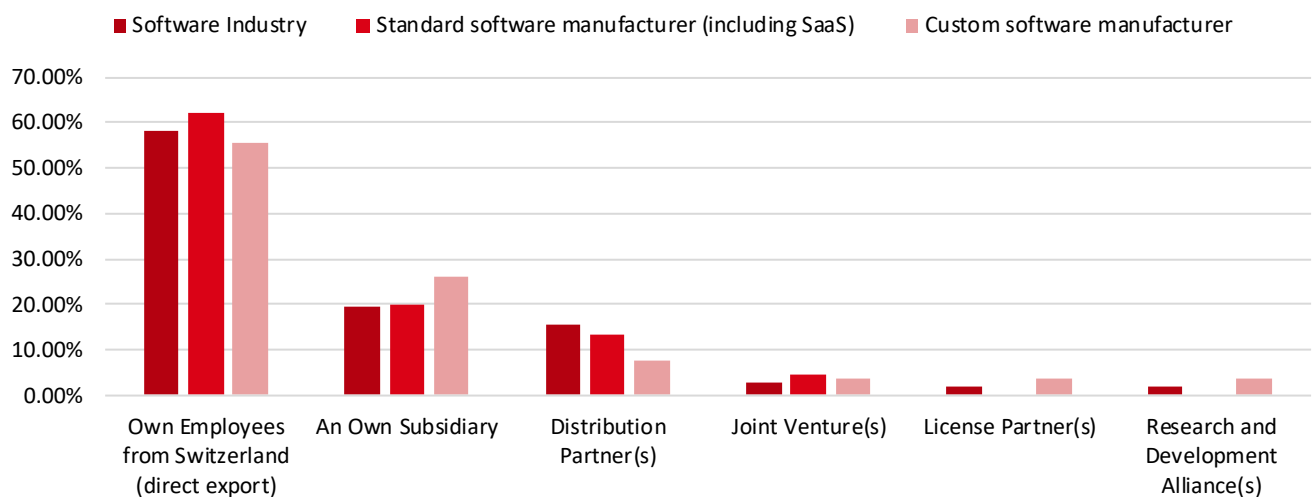
The first step towards internationalization for most Swiss software companies is an expansion to Germany. More than 50.0% of Swiss software companies make their first internationalization steps in Germany (see Figure 16). By a wide margin the United States (9.3%) and the neighboring countries France (7.5%), Italy (5.6%), and Austria (2.8%) follow. Other European countries account for 15.0% of the first internationali-

zation endeavours of Swiss software companies. Only 5.6% of the companies make their first internationalization endeavor outside Europe or the US.

Regarding the entry mode into the first international market, direct exports are by far the most popular (>50.0%), followed by own subsidiaries (19.0%), and distribution partners (16.0%) (see Figure 17).

Development of First international Market

Figure 17: Entry mode into first international market



Source: SSIS 2018

N = 108

Entry Modes into International Markets

Expansion into foreign markets can be achieved via five different entry modes:

Direct exports: Marketing and direct sales of software goods and services produced in Switzerland in another country.

Subsidiary: Direct ownership of a foreign entity that processes and sells software goods and services in the foreign country.

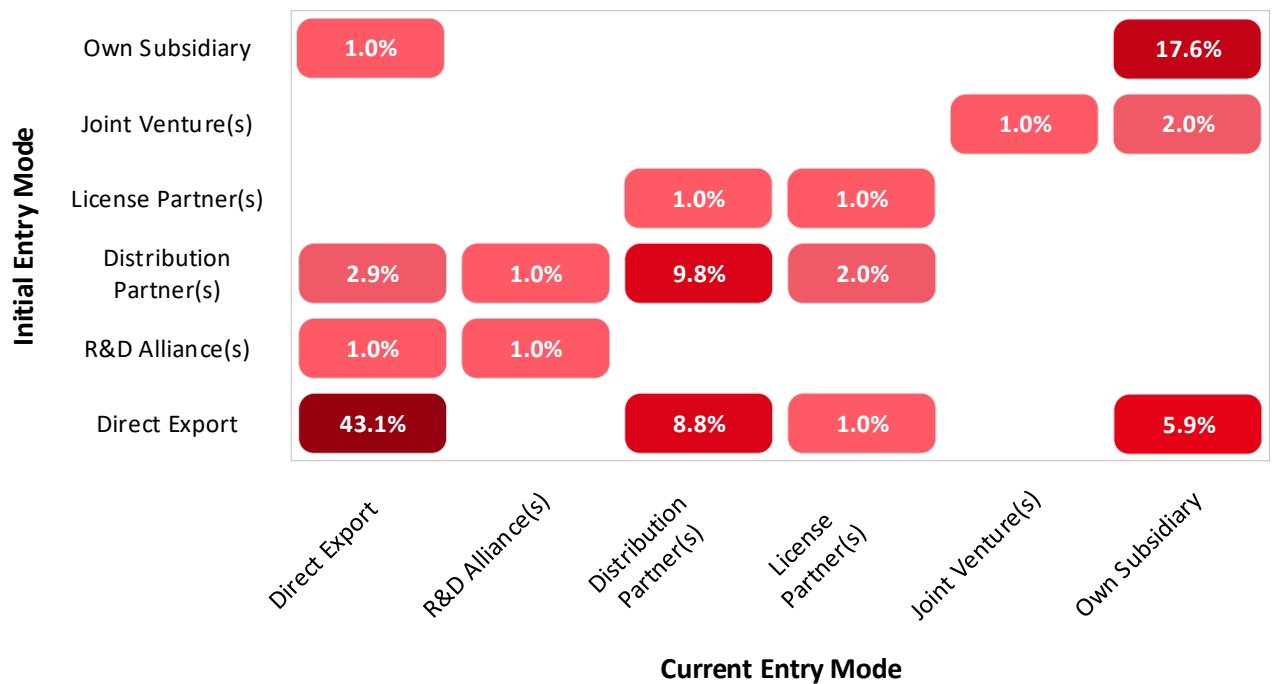
Distribution partner: A company in the foreign country is permitted to use and sell the software goods of the licensor.

Joint venture: A partnership with a local business is used to enter a foreign market.

License partner: An international license partnership allows foreign firms to distribute or use licenses in the foreign market.

Internationalization Paths of Swiss Software Companies

Figure 18: Initial and current entry mode into international market



Source: SSIS 2018

N = 102

Internationalization Paths of Swiss Software Companies

Figure 18 shows with which entry modes Swiss software companies have started their internationalization and the currently preferred entry mode.

By far the most popular entry mode is direct export. Approximately 2/3 of all companies have entered a market via direct export at some point in time. This entry mode is also the only really stable entry mode, i.e., companies that have started their internationali-

zation using direct exports, have the highest tendency to still use this entry mode.

Number two (three) is entering a market by founding (using) a foreign subsidiary (distribution partner). A little less than 30.0% (20.0%) of the companies have at some point in time entered a market using this mode and around 17.0% (9.0%) have continued to do so.

Drivers of Internationalization

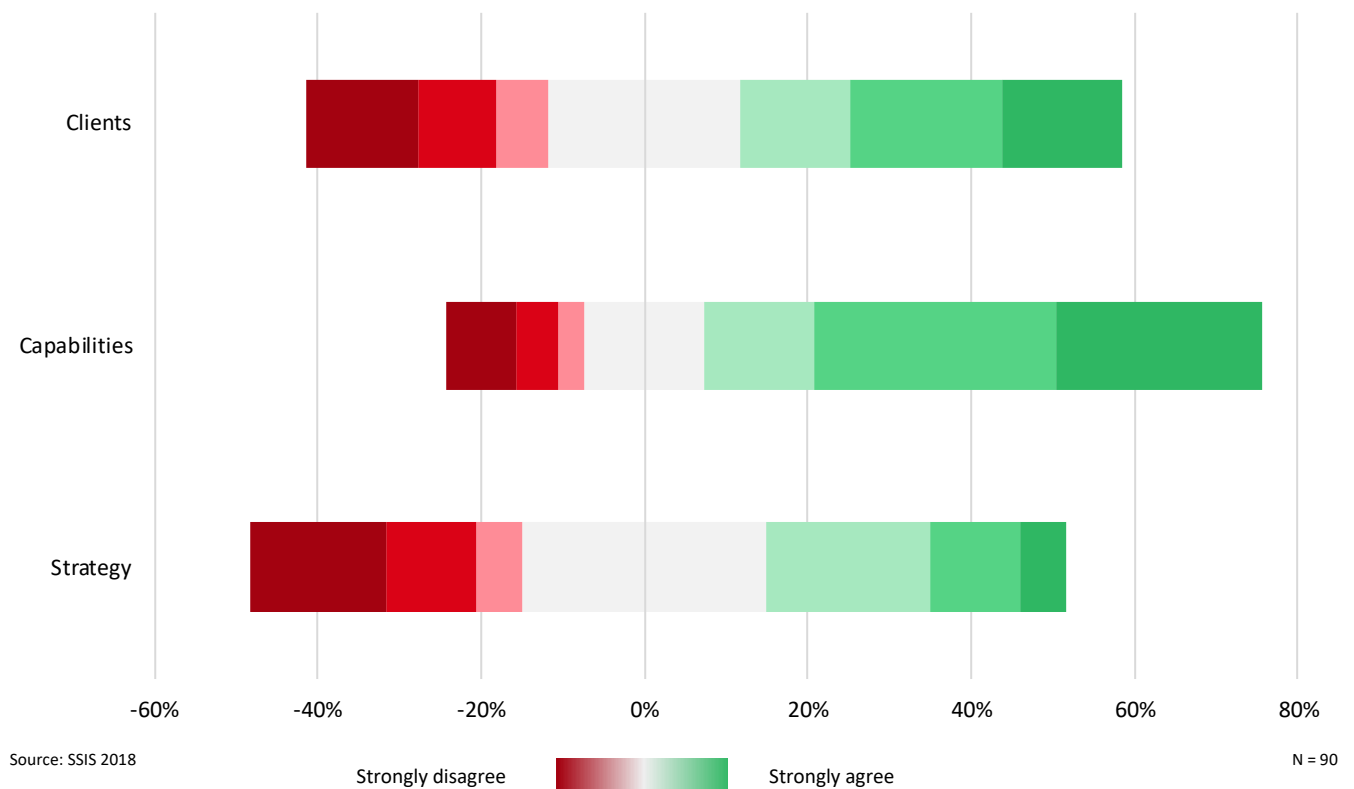
To understand the reasons behind internationalization endeavours, we looked at the drivers of internationalization. Three generic drivers of internationalization were distinguished: Strategy, Capabilities, and Clients (see Infobox at the bottom of this page for details).

By far the most important drivers of internationalization are „Capabilities“, followed by „Clients“ and „Strategy“ (see Figure 19). Thus, most internationali-

zation endeavours follow existing capabilities, i.e., Swiss software companies penetrate markets in which their capabilities are in demand.

Swiss software companies also often follow their existing clients, which is not surprisingly given the large number of multinational companies located in Switzerland. Noteworthy, strategic deliberations about where companies want to go are the least important driver.

Figure 19: Drivers of internationalization



Infobox: Three Firm-Level Drivers of Internationalization

Strategy

Expansion into foreign markets is driven by an explicitly defined internationalization strategy. In other words, the decision is based on the question: Where do I want to go?

Capabilities

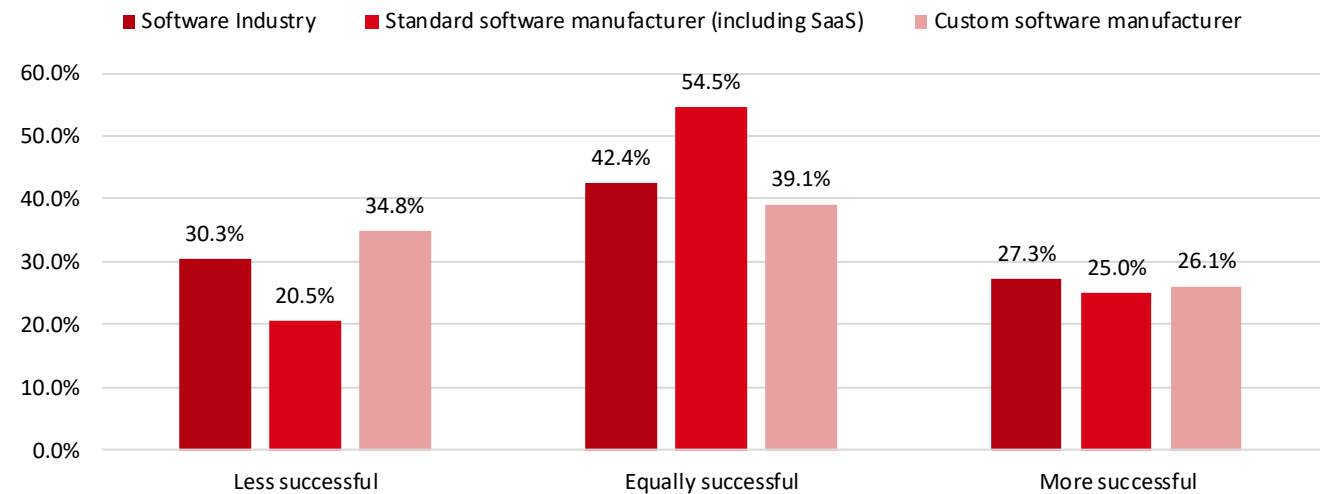
Expansion into foreign markets is driven by the company's existing operation capabilities. In other words, the decision is based on the question: What can I do?

Clients

Expansion is driven by its existing client relationship. In other words, the decision is based on the question: With whom should I go?

Success in International Market

Figure 20: Success in first international market in comparison to competitors by subindustry



Source: SSIS 2018

N = 99

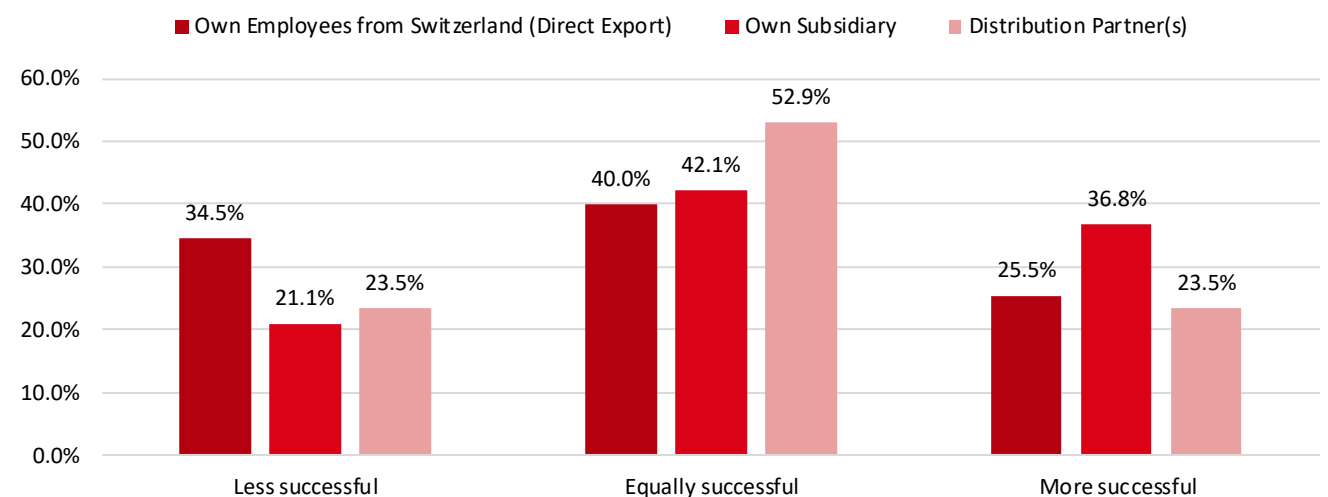
Success in Internationalization

Standard software manufacturers are less likely to have a very negative view (i.e., see themselves as less successful than competition) of their internationalization endeavours than custom software manufacturers (see Figure 20). Overall, custom software manufacturers appear to be more critical regarding the success of their internationalization.

When looking at the success of different entry modes (see Figure 21), it is noteworthy that the by far most popular entry mode (i.e., direct export) is also the entry mode which is evaluated most critically in terms of success. Entering an international market by founding an own subsidiary is the entry mode that is evaluated most favorably.

Success in International Market by Entry Mode

Figure 21: Success in first international market in comparison to competitors by entry mode

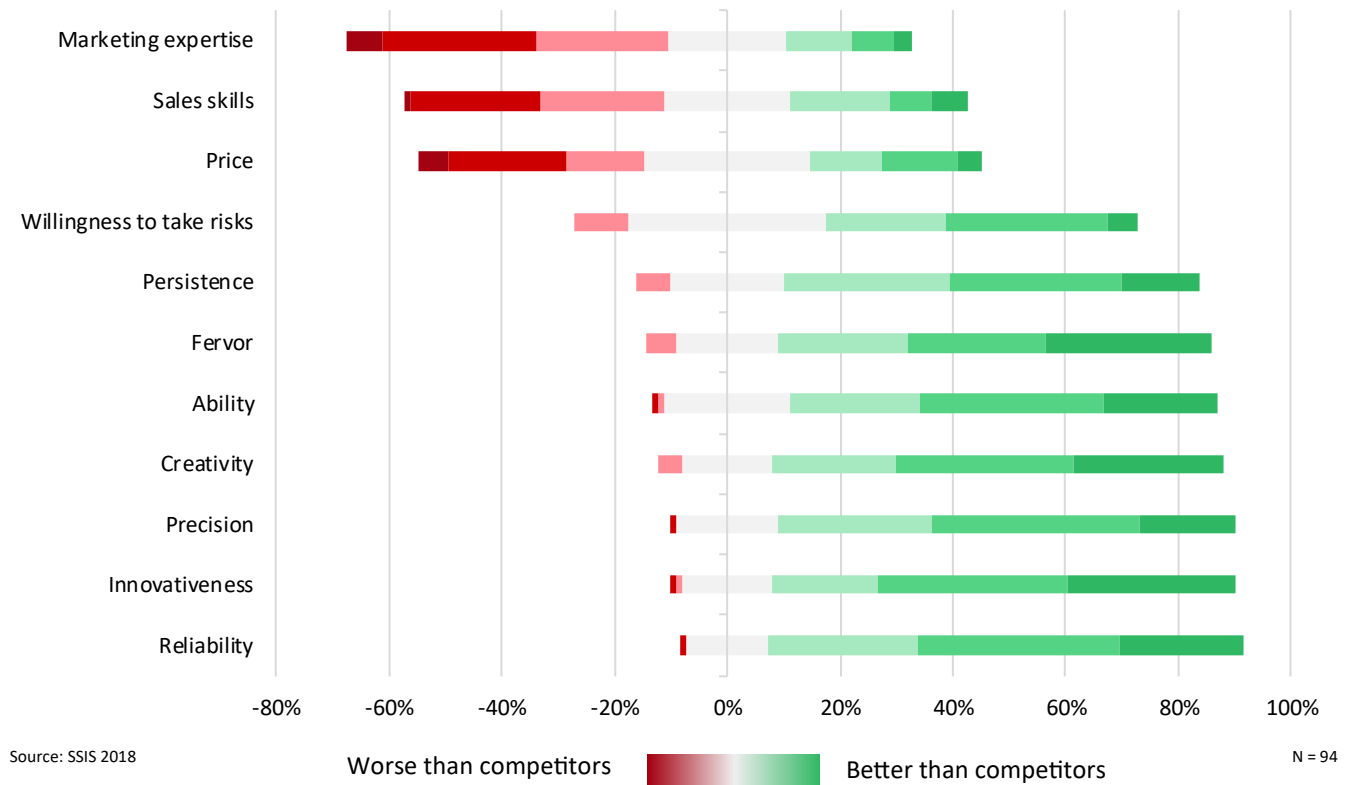


Source: SSIS 2018

N = 91

Foreign Customer Perspective

Figure 22: What do the customers of Swiss software companies value about those companies?



Customers value classic

Swiss Strengths

of the software industry

The View from the Customer

Why do foreign customers buy Swiss software products and services in the first place? To answer this question, we asked the software companies what their customers value the most about them. Figure 22 plots the answers to this question.

The strengths of Swiss software companies are very “Swiss”. Customers particularly value their reliability, innovativeness, and precision. Swiss software companies also believe to be seen as more “creative”, “able”, “fervor” and “persistent” than their competitors.

In three types of skills Swiss software companies believe to be seen as lagging behind competition: price, sales skills, and marketing skills. The competitive disadvantage regarding marketing and sales appears not

surprising given that most of the times Swiss software companies enter international markets via “direct export” (see Figure 17), i.e., without having a local presence in the international market. Such a local presence, however, is essential in building up the local expertise required to make marketing and sales efforts locally effective.

Thus, the overall conclusion that can be drawn is: if Swiss Software companies want to fully exploit their competitive strengths in more technical areas such as reliability, innovativeness and precision, they will have to enter international markets with a strong local presence and as part of a wider internationalization strategy.

Outsourcing in the Swiss Software Industry

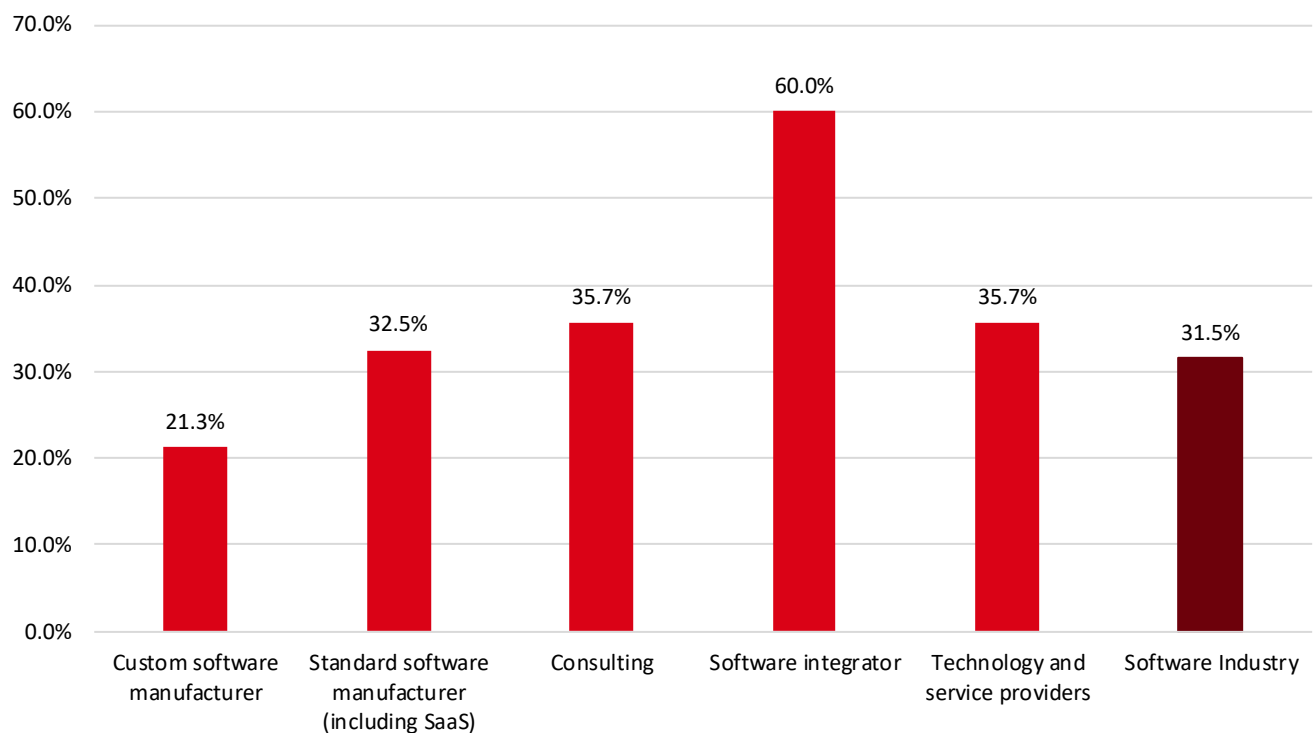
A major trend in the IT industry is outsourcing, i.e., the development, improvement, and operation of IT products and services through external vendors. The SSIS 2018 analyzes outsourcing in the Swiss software industry for the second time.

Our results show that the propensity to outsource

remains highest among software integrators (+7.8 percentage points). They are followed by consulting companies (+1.4) and technology and service providers (+32.4), and standard software manufacturers (-7.3).

Outsourcing Yes—No

Figure 23: Percentage of companies that outsource by subindustries



Source: SSIS 2018

N = 238

What is Outsourced and to What Extent?

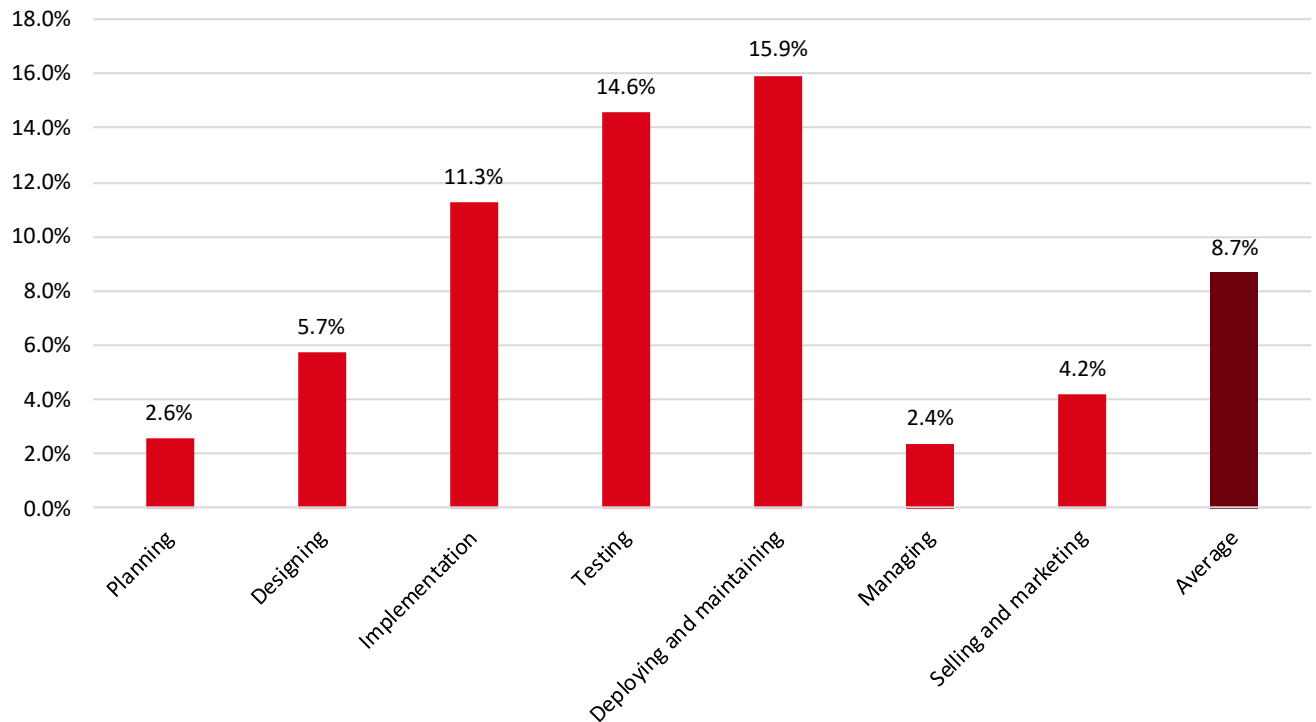
Figure 24 shows that different activities are outsourced to different extents. 15.9% of all deployment and maintenance activities, 14.6% of testing activities, and 11.3% of implementation activities are outsourced—whereas designing, planning, managing, and selling the software are outsourced to considerably smaller extents (all <3.0%).

Figure 25 shows the extent of outsourcing by activities

of only those companies that do outsource. This changes the picture dramatically: Companies that outsource, outsource more than 40.0% of implementation and testing activities, 27.7% of deployment and maintenance, and still 18.0% of design-related activities. Yet, even these more outsourcing-savvy companies remain reluctant regarding the outsourcing of planning and managing activities.

Extent of Outsourcing in the Swiss Software Industry

Figure 24: Percentage of outsourced activities for all software companies

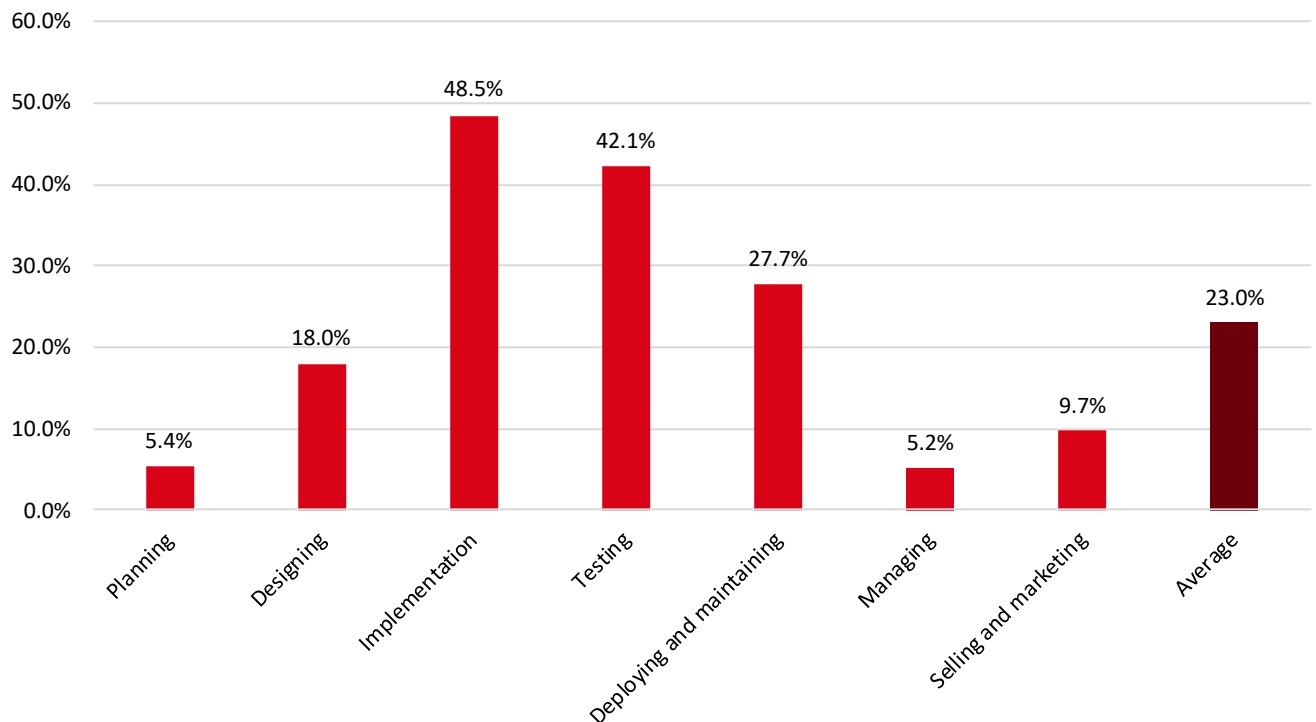


Source: SSIS 2018

N = 271

Extent of Outsourcing in the Swiss Software Industry—Outsourcing Companies Only

Figure 25: Percentage of outsourced activities for those companies that outsource

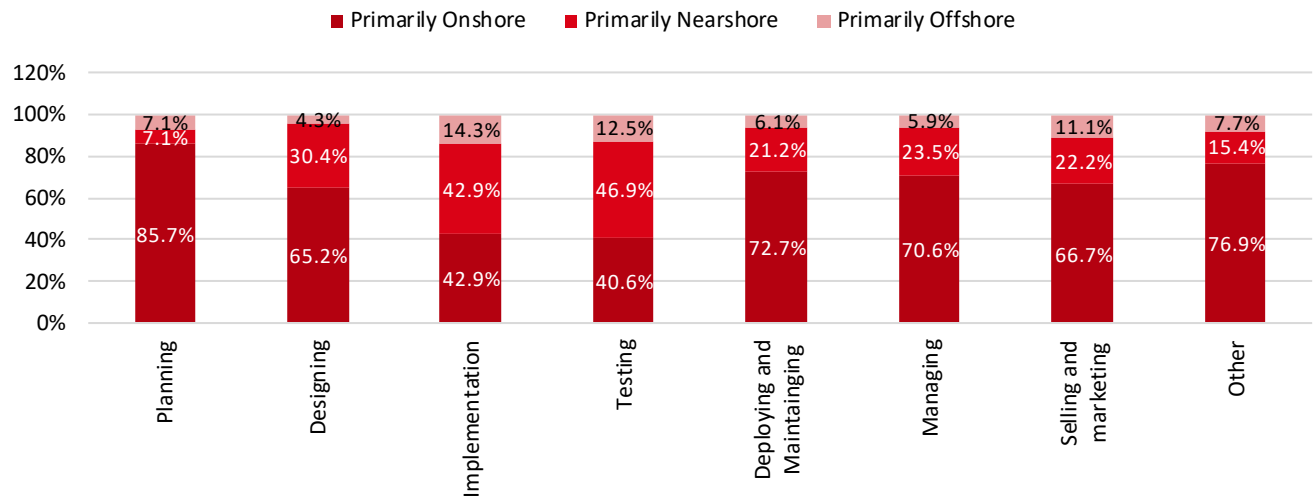


Source: SSIS 2018

N = 131

Sourcing Locations for External Service Providers

Figure 26: Percentage of onshoring, nearshoring, and offshoring by activities



Source: SSIS 2018

N = 200

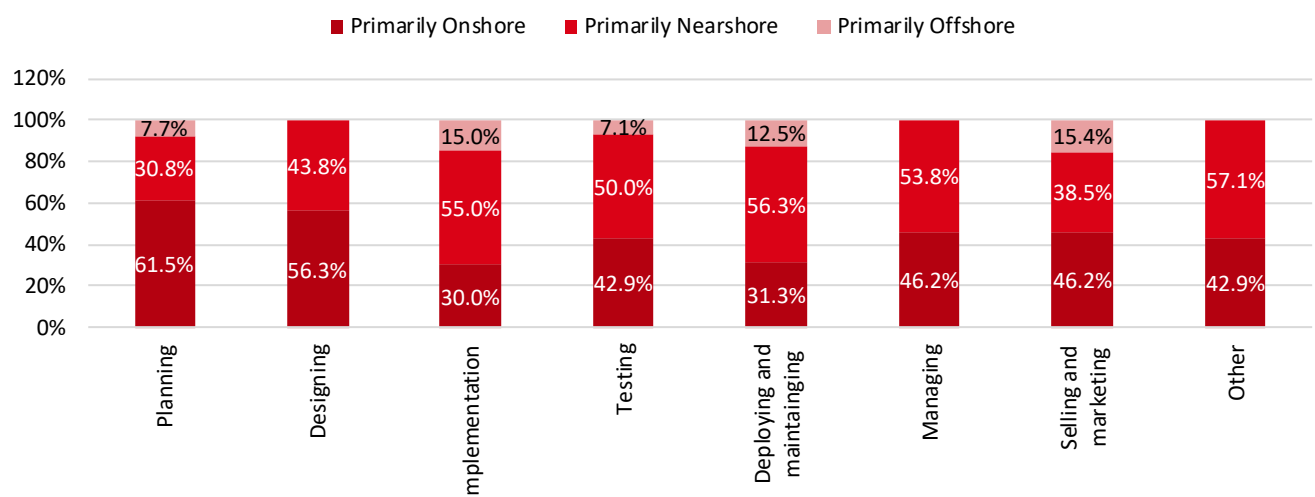
Locations of Outsourced Activities

IT products, resources, and services can be sourced from external service providers (i.e., outsourcing) or internal service providers (i.e., own subsidiaries). These internal and external service providers can be located onshore, nearshore, or offshore. Figures 26 and 27 show the locations from which different activities are sourced for external and internal service providers.

Interestingly, when Swiss software companies outsource IT services to external service providers, they are much more inclined to select an onshore supplier than when they source to an internal service provider. Internal service providers are considerably more often in nearshoring locations. However, offshoring is similarly unpopular as a location for internal service providers as it is for external service providers.

Sourcing Locations for Internal Service Providers

Figure 27: Percentage of onshoring, nearshoring, and offshoring by activities

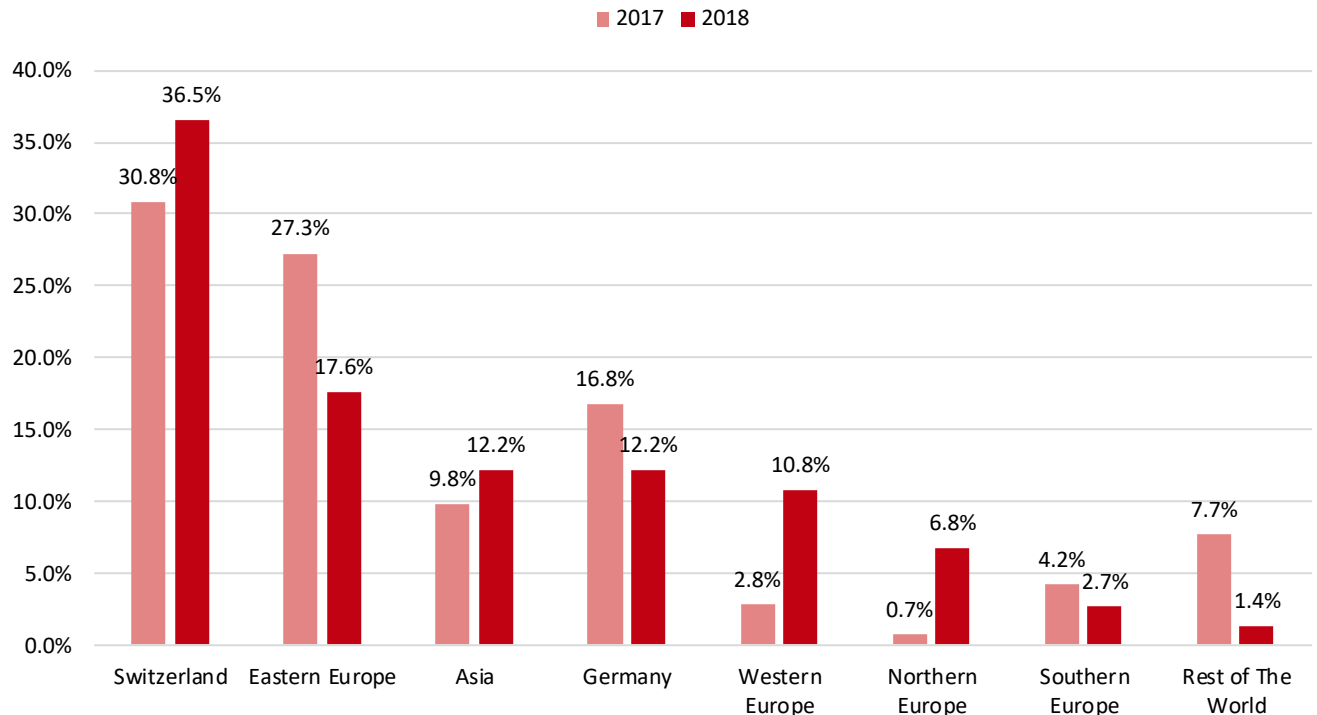


Source: SSIS 2018

N = 112

The Most Popular Countries for Sourcing

Figure 28: Percentage of companies that mention the following countries as favorite sourcing destination



Source: SSIS 2018

N = 74

Switzerland is with
36.5%
 the most popular sourcing destination

To Which Locations do Swiss Software Companies Outsource?

For most activities, the top outsourcing destination remains Switzerland. Planning, managing, as well as deployment and maintenance are first and foremost conducted onshore (all >70.0%, see Figure 26). The notable exceptions are “implementation” and “testing” which are most frequently conducted in nearshore locations. The amount of offshoring is comparatively small across all activities. However, implementation and testing are offshored most frequently.

We also asked participants to name the top outsourcing countries (see Figure 28). Again, Switzerland reached the top spot and even strengthened its leading position compared to last year. Germany is the top

non-Swiss country. However, other nearshore locations, such as the neighbouring European countries, remain popular (especially Eastern Europe). Combined, these near and onshore locations are much more popular than the Asian offshore locations.

Method and Official Statistics

About SSIS

Main Charts

Line Chart



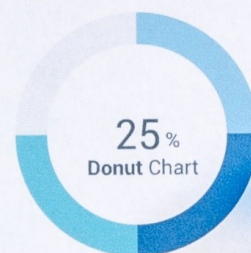
Area Chart



Bar Chart

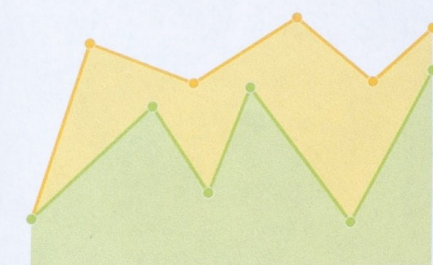


Donut Chart

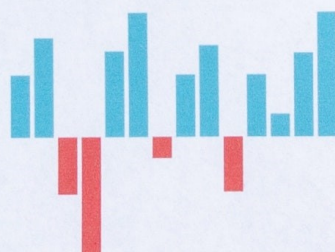


Sparkline Charts

Line Chart



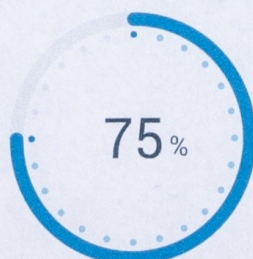
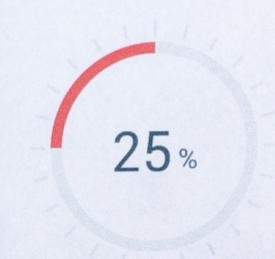
Bar Chart



Pie Chart



Easy Pie Charts



Official Statistics - Employees and Added Value

Table 1: Distribution of Added Value in 2016 and distribution of Full-Time Equivalents in 2016 by industry

	Added Value	FTEs
Energy Supply, Water Supply, Waste Management	1.6%	1.1%
Construction	5.5%	8.4%
Manufacturing	18.7%	16.1%
Trade, Repair of Motor Vehicles & Motorcycles	14.5%	13.8%
Accommodation and Food Service Activities	1.7%	4.8%
IT and Other Information Services (NOGA 62, 63)	2.3%	2.3%
Financial Service Activities & Insurance	9.4%	4.0%
Public Administration	10.8%	4.2%
Education	0.6%	5.8%
Human Health & Social Work Activities	8.1%	13.0%
Transportation, Storage, Information & Communication	6.2%	6.7%
Real Estate, Professional, Scientific, Technical & Administrative Activities	18.0%	15.6%
Other Sectors	2.5%	4.0%
Total	100%	100%

Source: BESTA , Added Value 2016, FTEs 2016

The SSIS as Complement to Official Statistics

Data about the Swiss software industry is provided as part of official statistics nested in the broad categories of “Computer programming, consultancy and related activities” and “Information service activities” (NOGA codes 62 & 63).

The respective data on added value (~revenue) and number of employees from Swiss Statistics emphasize the major importance of the Helvetic Information Technology and Information Services sector. With more than 20 billion Swiss francs it adds roughly 2.3% to the Swiss GDP (see Table 1) and employs almost 2.3% of all jobholders in Switzerland (see Table 1), and is one of the strongest growing sectors.

Official statistics provide reliable information about the size and growth of the overall IT sector. However,

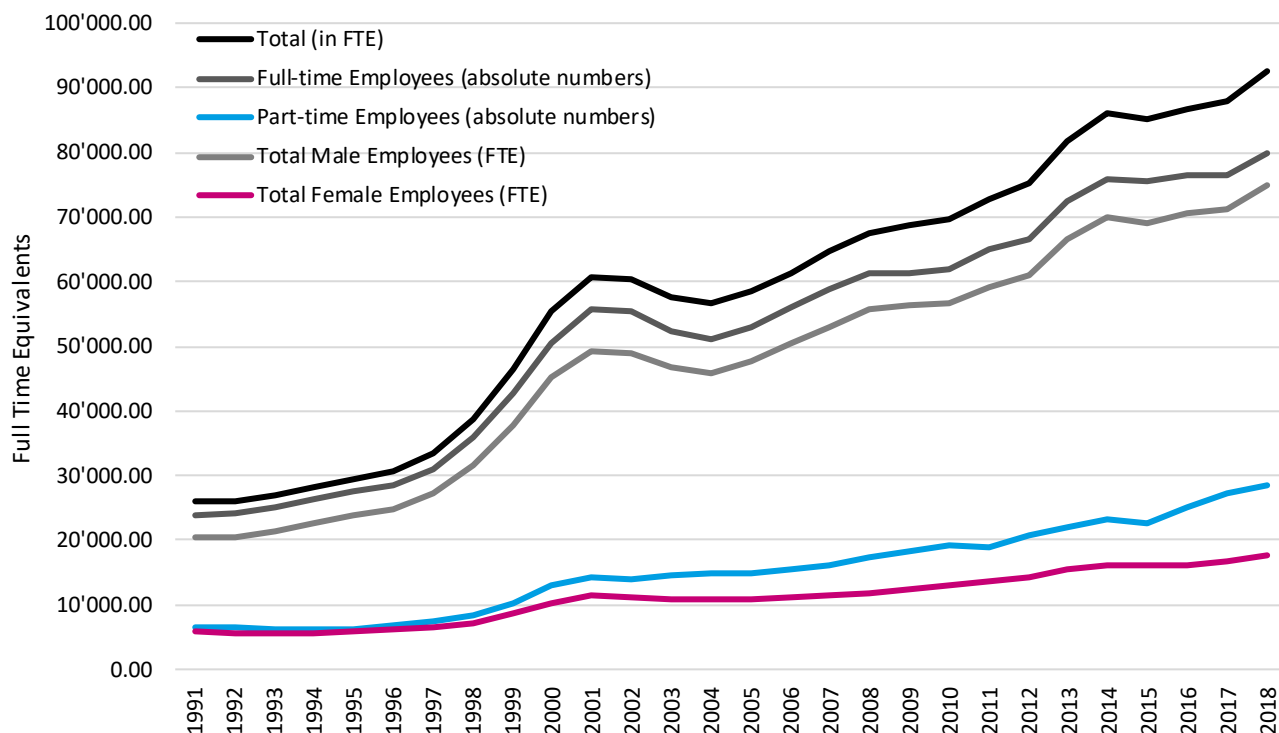
they do not draw a very detailed picture about the Swiss software industry.

Therefore, the SSIS positions itself as a complementary study that enriches official statistics. Compatibility with official statistics is ensured by focusing on two NOGA codes (62, 63). Yet, we provide a richer picture of what is going on within these codes. Specifically, the report enables the following additional insights:

- ◆ Trend analysis of key performance indicators incl. EBIT, R&D expenditure, employee growth, and revenue growth
- ◆ Indicators on profitability and R&D investments
- ◆ Analyses along practically relevant categories (standard vs. custom software, maintenance vs. testing, etc.).

Employees in the Swiss ICT Sector

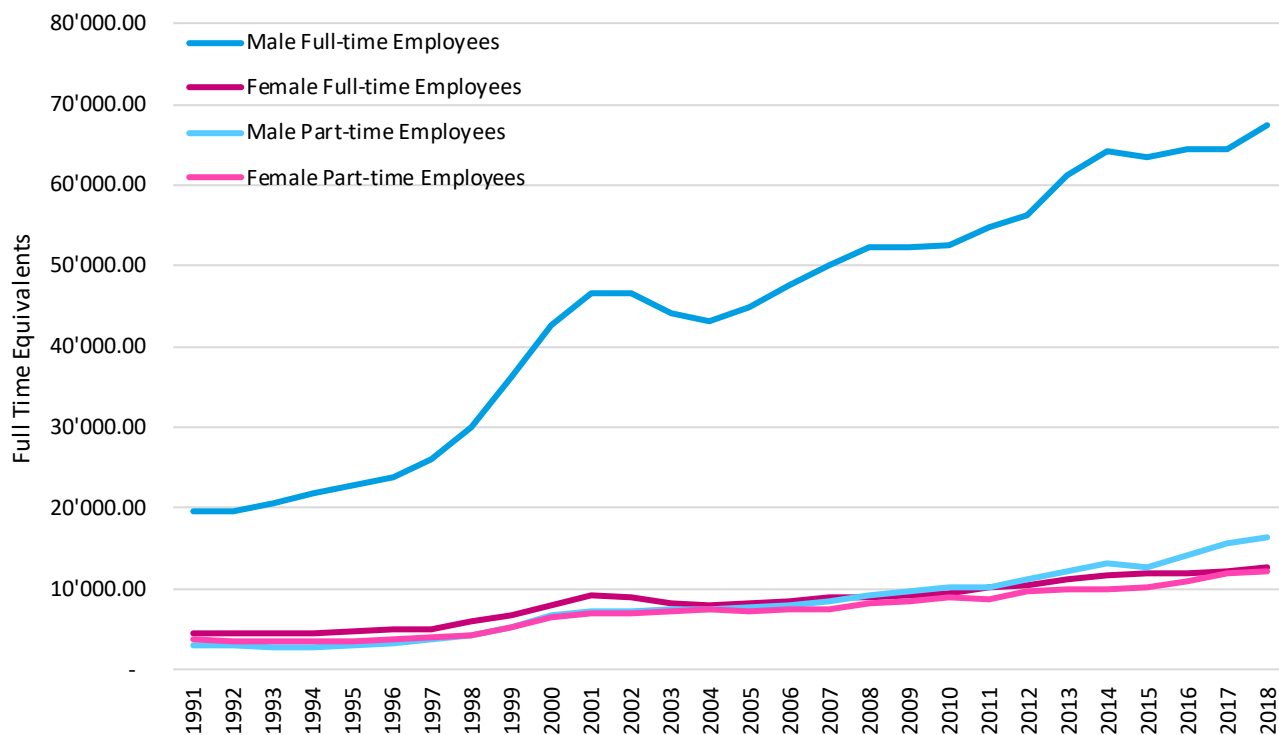
Figure 29: Number of FTEs in NOGA 62 & 63 from 1991-2018



Source: BESTA 2018

Part-Time Employees in the Swiss ICT Sector

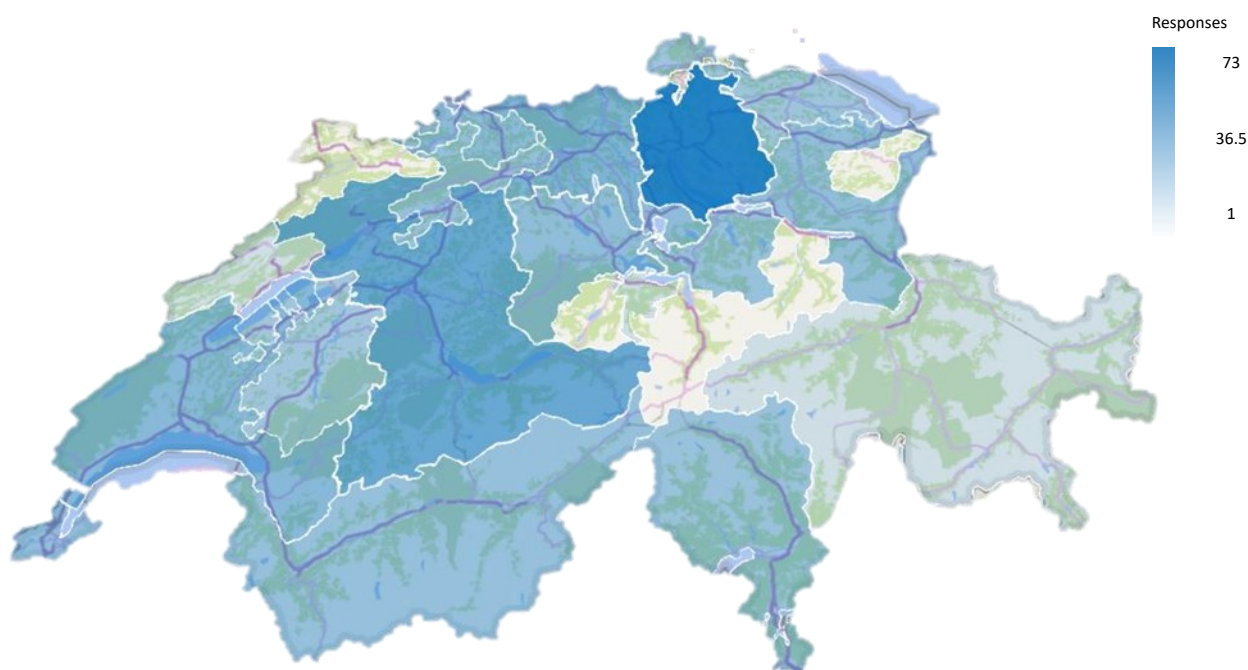
Figure 30: Number of FTEs and Part-Time Employees in NOGA 62 & 63 from 1991 - 2018



Source: BESTA 2018

Participants in 2018—Geographical Distribution

Figure 31: Participating companies per canton



Source: SSIS 2018

About the SSIS in 2018

This year we conducted the Swiss Software Industry Survey (SSIS) for the fourth time. With the fourth iteration, the SSIS managed to defend its pole position in terms of size, geographical reach, and methodological rigor:

Reach of the survey: The Swiss software industry aims to represent the entire Swiss software industry—rather than only a couple of large companies. Therefore, the SSIS...

- ◆ Builds on an extended and refined high-quality contact database with approximately 5'000 validated Swiss software companies
- ◆ Covers all Swiss language regions
- ◆ Covers 21 cantons (see Figure 31)
- ◆ Builds on a large sample size with 534 participants, 335 complete responses, and 221 data points on revenue and profitability

Rigor of the survey: To meet highest research standards...

- ◆ ... we developed, refined, and assessed new constructs by following state-of-the-art procedures for construct development
- ◆ ... we relied on the extrapolation method developed for last year's SSIS, which builds on state-of-the-art econometrical procedures (post-stratification by region, sub-industries, company size, and revenue)

Additional benefits for participating companies: All participants of the survey can compare their own performance against other companies using our benchmarking website. In addition: Companies which participate regularly can now benchmark their performance over time (www.softwareindustrysurvey.ch)

